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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/669,413	09/25/2003	Borislav Nikolik		5057

7590 01/25/2007  
 BORISLAV NIKOLIK  
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EXAMINER
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WOOD, WILLIAM H

ART UNIT	PAPER NUMBER
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2193

SHORTENED STATUTORY PERIOD OF RESPONSE	MAIL DATE	DELIVERY MODE
3 MONTHS	01/25/2007	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

**Office Action Summary**

Application No.

10/669,413

Applicant(s)

NIKOLIK, BORISLAV

Examiner

William H. Wood

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 25 September 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-19 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 12-14 is/are allowed.
- 6) ☒ Claim(s) 1,3,7,8,10,11 and 15-19 is/are rejected.
- 7) ☒ Claim(s) 2,4-6 and 9 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_.
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_.
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: \_\_\_\_\_.

**DETAILED ACTION**

Claims 1-19 are pending and have been examined.

***Claim Rejections - 35 USC § 101***

1. 35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

2. Claims 16-19 are rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter. Claims 16-17 recite software *per se* and as such are not statutory. Claims 18-19 recite non-functional descriptive material on a storage medium and are therefore non-statutory. The claims only describe information stored on a medium wherein the information does not perform a function. This is similar to a book being stored on a medium.

***Claim Rejections - 35 USC § 102***

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

4. Claims 1, 3, 8, 10-11 and 15-19 are rejected under 35 U.S.C. 102(b) as being anticipated by **Plum** (USPN 5,758,061).

Claim 1

**Plum** disclosed a computer program testing method for collecting internal test distribution information, and for indicating test diversity throughout source files written in the same or different programming languages (*column 9, lines 10-27*); the method includes the steps:

parsing and instrumenting the computer program to provide an instrumented computer program (*column 9, lines 37-40 and 53-56*);

executing the instrumented computer program to generate a test-distribution record and a path trace (*column 9, lines 23-27 and 40-50; column 7, lines 36-43, "internal indications of which paths ..."; column 7, lines 22-36; column 5, lines 45-64*); and

producing test diversity output using the test-distribution record and the path trace to indicate the internal conditional diversity, data diversity, and path diversity of the program (*column 13, lines 15-31, "indicates to what extent the chunks of the original source code have been 'covered' by testing", chunks previously defined column 9, lines 40-50, so that path diversity is the chunks reached, data diversity is the testing to reach the chunks and conditional diversity is the branching to produce the paths*).

Claim 3

**Plum** disclosed a method of software testing as in claim 1 further including the step of producing an audible report indicating conditional, data, and path diversity for the program under test (*column 15, line 65*).

Claim 8

**Plum** disclosed a method for parsing computer software as in claim 1 by only parsing conditional statements and isolating the conditional expression and conditional sub-expressions in the conditional statement (*column 7, lines 1535; column 9, lines 37-50*).

Claim 10

**Plum** disclosed a method as in claim 1 where the collection of distribution/trace data is cumulative, and where the permanent distribution records/traces are kept updated until they are initialized (*column 13, lines 25-31*).

Claim 11

**Plum** disclosed a method as in claim 1 where the permanent distribution records for different test runs are merged into a single permanent distribution

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record (*column 13, lines 28-31*).

*Claims 15 and 16*

The limitations of claims 15 and 16 correspond the limitations of claim 1 and as such are rejected in a corresponding manner. Further, audible report indications are found in column 15, line 65 of **Plum**.

*Claim 17*

**Plum** disclosed an apparatus as in claim 16 wherein the instrumenter inserts instrumentation code to automatically generate Boolean values and substitute these generated values for the actual values that result from complete evaluation of a conditional expression (*column 7, line 66 to column 8, line 24*).

*Claims 18-19*

The limitations of claims 18 and 19 correspond the limitations of claims 1 and 16-17 and as such are rejected in a corresponding manner.

***Claim Rejections - 35 USC § 103***

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary

skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. Claim 7 is rejected under 35 U.S.C. 103(a) as being unpatentable over **Plum** (USPN 5,758,061) in view of **Gonzalez** et al. (US Patent Application Publication 2004/0025081 A1).

Claim 7

**Plum** did not explicitly state a method as in claim 1 wherein the step of producing a diversity output includes the step of calculating the path diversity from a compact path trace as a percentage of conditional expressions for which, if the conditional expression evaluated to true on a path, it also evaluated to false on the same path, and vice versa. **Gonzalez** demonstrated that it was known at the time of invention to calculate conditional expressions base on true and false on the same path (paragraph 0023 and 0024, "evaluated to both TRUE an FALSE"). It would have been obvious to one of ordinary skill in the art at the time of invention to implement the path tracing and branch coverage system of **Plum** with evaluating both TRUE and FALSE conditions as found in **Gonzalez's** teaching. This implementation would have been obvious because one of ordinary skill in the art would be motivated to attempt to fully analyze all possible paths.

***Allowable Subject Matter***

7. Claims 12-14 are allowed.
8. Claims 2, 4-6 and 9 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

***Correspondence Information***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to William H. Wood whose telephone number is (571)-272-3736. The examiner can normally be reached 10:00am - 4:00pm Monday thru Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Meng-Ai An can be reached on (571)-272-3756. The fax phone numbers for the organization where this application or proceeding is assigned are (571)273-8300 for regular communications.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR systems, see <http://pair-direct.uspto.gov>. For questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703)305-3900.



William H. Wood  
Patent Examiner  
AU 2193  
January 19, 2007